

AMENDMENTS TO THE CLAIMS:

Amend the claims as follows:

Claims 1-22 (Canceled).

23. (Previously Presented) An isolated HCV E1 envelope peptide as defined by any of SEQ ID Nos:1-16 and 37.

24. (Previously Presented) An isolated HCV E1 envelope peptide consisting of up to 45 contiguous amino acids wherein an amino acid sequence selected from SEQ ID Nos:1-16 and 37 is present in said peptide.

25. (Previously Presented) An isolated peptide selected from the group consisting of:

- a peptide of 21 to 23 contiguous amino acids of SEQ ID NO:6;
- a peptide of 21 to 28 contiguous amino acids of SEQ ID NO:10;
- a peptide of 21 to 30 contiguous amino acids of SEQ ID NO:13;
- a peptide of 21 to 33 contiguous amino acids of SEQ ID NO:11 or 15;
- a peptide of 21 to 34 contiguous amino acids of SEQ ID NOs:1-5 or 7-9;
- a peptide of 21 to 35 contiguous amino acids of SEQ ID NO:12;
- a peptide of 21 to 39 contiguous amino acids of SEQ ID NO:14 or 37;
- a peptide of 21 to 40 contiguous amino acids of SEQ ID NO:16.

Claims 26-27 (Canceled)

28. (Withdrawn) A method of immunizing a human against infection with HCV-related virus or any mutated strain thereof, comprising administering to said human at least one peptide according to any one of claims 23 to 25.

29. (Previously Presented) An assay kit for detecting the presence of anti-HCV-related virus antibodies within a sample of body fluid comprising:

optionally, a solid support,
at least one peptide according to any one of claims 23 to 25, and
optionally, markers which allow detection of complexes formed between anti-HCV-related virus antibodies within a sample of body fluid with said at least one peptide.

30. (Withdrawn) A bioassay for identifying a compounds which modulate the interaction between a peptide according to any one of claims 23 to 25 and an anti-HCV-related virus antibody, said bioassay comprising

- (i) contacting said peptide with said anti-HCV-related virus antibody;
- (ii) after (i), determining the binding between said peptide and said anti-HCV-related virus antibody;
- (iii) adding said compound or a combination of said compounds to the peptide-antibody complex formed in (i);
- (iv) after (iii), determining the binding between said peptide and said anti-HCV-related virus antibody; and

(v) inferring, from (ii) and (iv) the modulation of binding between said peptide and said anti-HCV-related virus antibody by said added compound or said added combination of compounds.

31. (Withdrawn) A bioassay for identifying a compounds which modulate the interaction between a peptide according to any one of claims 23 to 25 and an anti-HCV-related virus antibody, said bioassay comprising

(i) determining the binding between said peptide and said anti-HCV-related virus antibody;

(ii) contacting said peptide with said compound;

(iii) adding said anti-HCV-related virus antibody to the peptide-compound complex formed in (ii);

(iv) after (iii), determining the binding between said peptide and said compound;

(v) inferring, from (i) and (iv) the modulation of binding between said peptide and said anti-HCV-related virus antibody by said compound.

32. (Previously Presented) The isolated peptide of any one of claims 23-25 which is synthesized chemically.

33. (Previously Presented) The isolated peptide of any one of claims 23-25 which is synthesized using recombinant DNA techniques.

34. (Previously Presented) The isolated peptide of claim 33 wherein said peptide is synthesized using a plasmid vector comprising a nucleotide sequence encoding said peptide operably linked to transcription regulatory elements.

35. (Previously Presented) The isolated peptide of any one of claims 23-25 which is biotinylated or which is containing cysteine bridges.

36. (Previously Presented) The isolated peptide of any one of claims 23-25 which binds and recognizes anti-HCV virus antibodies.

37. (Previously Presented) The isolated peptide of claim 35 which binds and recognizes anti-HCV virus antibodies.

38. (Previously Presented) A combination of peptides comprising a peptide of any one of claims 23-25.

39. (Previously Presented) A combination of peptides comprising a peptide of claim 35.

40. (Previously Presented) A combination of peptides comprising a peptide of claim 36.

41. (Previously Presented) A composition comprising an isolated peptide of any one of claims 23-25.

42. (Previously Presented) A composition comprising an isolated peptide of claim 35.

43. (Previously Presented) A composition comprising an isolated peptide of claim 36.

44. (Previously Presented) An assay kit for detecting the presence of anti-HCV virus antibodies within a sample of body fluid comprising at least one peptide of any one of claims 23-25.

45. (Previously Presented) An assay kit for detecting the presence of anti-HCV virus antibodies within a sample of body fluid comprising a combination of peptides of claim 35.

46. (Previously Presented) An assay kit for detecting the presence of anti-HCV virus antibodies within a sample of body fluid comprising a combination of peptides of claim 36.

47. (Previously Presented) An assay kit for detecting the presence of anti-HCV virus antibodies within a sample of body fluid comprising a combination of peptides of claim 38.

48. (Previously Presented) An assay kit for detecting the presence of anti-HCV virus antibodies within a sample of body fluid comprising a combination of peptides of claim 39.

49. (Withdrawn) A method of raising an immune response in a human against hepatitis C virus, comprising administering to said human at least one peptide according to any one of claims 23-25.

50. (Withdrawn) A method of raising an immune response in a human against hepatitis C virus, comprising administering to said human at least one peptide according to claim 32.

51. (Withdrawn) A method of raising an immune response in a human against hepatitis C virus, comprising administering to said human at least one peptide according to claim 33.

52. (Withdrawn) A method of raising an immune response in a human against hepatitis C virus, comprising administering to said human at least one peptide according to claim 34.

53. (Withdrawn) A method of raising an immune response in a human against hepatitis C virus, comprising administering to said human at least one peptide according to claim 35.

54. (Withdrawn) A method of raising an immune response in a human against hepatitis C virus, comprising administering to said human a combination of peptides according to any one of claims 23-25.

55. (Withdrawn) A method for diagnosing exposure to or infection by HCV viruses comprising:

contacting anti-HCV virus antibodies within a sample of body fluid with at least one peptide according to any one of claims 23-25, determining the binding of anti-HCV virus antibodies within a sample of body fluid with said at least one peptide.

56. (Withdrawn) The method according to claim 55 wherein said anti-HCV virus antibodies are anti-HCV antibodies.

57. (new) An assay kit for detecting the presence of anti-HCV antibodies within a sample of body fluid comprising:

optionally, a solid support,

at least one peptide according to any one of claims 23 to 25, and

optionally, markers which allow detection of complexes formed between anti-HCV antibodies within a sample of body fluid with said at least one peptide.

58. (new) A bioassay for identifying a compounds which modulate the interaction between a peptide according to any one of claims 23 to 25 and an anti-HCV antibody, said bioassay comprising

- (i) contacting said peptide with said anti-HCV antibody;
- (ii) after (i), determining the binding between said peptide and said anti-HCV antibody;
- (iii) adding said compound or a combination of said compounds to the peptide-antibody complex formed in (i);
- (iv) after (iii), determining the binding between said peptide and said anti-HCV antibody; and
- (v) inferring, from (ii) and (iv) the modulation of binding between said peptide and said anti-HCV antibody by said added compound or said added combination of compounds.

59. (new) A bioassay for identifying a compounds which modulate the interaction between a peptide according to any one of claims 23 to 25 and an anti-HCV antibody, said bioassay comprising

- (i) determining the binding between said peptide and said anti-HCV antibody;
- (ii) contacting said peptide with said compound;

- (iii) adding said anti-HCV-related virus antibody to the peptide-compound complex formed in (ii);
- (iv) after (iii), determining the binding between said peptide and said compound;
- (v) inferring, from (i) and (iv) the modulation of binding between said peptide and said anti-HCV antibody by said compound.